BROADCAST tools INC

Installation and Operation Manual

Audio Sentinel®

Web enabled dual channel stereo silence monitor.

No part of this document may be reproduced or distributed without permission.

NOTE: We recommend the use of Firefox or Safari for Windows as your browser.

Manual update: 06/10/2010

For firmware versions equal to or greater than ASX_V1.33_ASW_V1.29_ASP_1.02

If you need a firmware upgrade, contact Broadcast Tools®

Due to the dynamic nature of product design, the information contained in this document is subject to change without notice. Broadcast Tools, Inc., assumes no responsibility for errors and/or omissions contained in this document. Revisions of this information or new editions may be issued to incorporate such changes.

Broadcast Tools® is a registered trademark of Broadcast Tools, Inc.
tiny TOOLS™ is a trademark of Broadcast Tools, Inc.
All Sentinel® labeled products are registered trademarks of Broadcast Tools, Inc.
Copyright® 1989 - 2010 by Broadcast Tools, Inc. All rights reserved.
No part of this document may be reproduced or distributed without permission.

Visit **www.broadcasttools.com** for important product update information.

Table of Contents

Section Title . . . . . Page #

Introduction 3
Safety Information 3
Who to Contact for Help 3
Product Overview 4
Inspection 4
Installation 4
Surge Protection 4
- UPS Standby Power System 4
- "NET" RJ45 network connector 5
- 7.5 VDC POWER connector 5
- PWR/Heartbeat, Select/EXTernal and Relay LED's 5
- K3, K4, K5 relay connections 5
- Select/EXT input connection 5
- Chassis ground 5
- Audio Input connections 5
- Audio Output connections 6

Manual Operation and Indicators 6
Ethernet "Quick Start" Guide 6
Opening the LOGIN Web Page 9
Web Setup/Operation 10
- "Login" Web Page 10
- "Monitor/Control" Web Page 11
- "User Setup" Web Page 13
- "Silence Sensor Setup" Web Page 14
- "Email/Network Setup" Web Page 17
- Restoring Network Factory Defaults 17
- "Show Log" Web Page 22
- "About" Web Page 23

Specifications 24
Warranty 25
Declaration of Conformity 26
Fractional Schematic . . . . . Appendix
Faceplate Labels . . . . . Appendix

WEBSITE:
Visit our web site for product updates and additional information.

INTRODUCTION

Thank you for your purchase of a Broadcast Tools® Audio Sentinel® Web-enabled two channel stereo silence monitor/audio switcher (referred to as the Audio Sentinel® throughout this manual). We're confident that this product will give you many years of dependable service. This manual is intended to give you all the information needed to install and operate the Broadcast Tools® Audio Sentinel®.

SAFETY INFORMATION

Only qualified personnel should install Broadcast Tools® products. Incorrect or inappropriate use and/or installation could result in a hazardous condition.

Broadcast Tools, Inc., is unable to support NON-Broadcast Tools software, hardware or NON-Broadcast Tools computer/hardware/software problems. If you experience these problems, please research your hardware/software instruction manuals or contact the manufacturers technical support department.

WHO TO CONTACT FOR HELP

If you have any questions regarding your product or you need assistance, please contact your distributor from whom you purchased this equipment.

If you would like more information about Broadcast Tools® products, you may reach us at:

Broadcast Tools, Inc.
131 State Street
Sedro-Woolley, WA 98284-1540 USA
Voice: 360.854.9559
Fax: 866.783.1742

Internet Home Page: www.broadcasttools.com
E-mail: support@broadcasttools.com

THANK YOU FOR CHOOSING
BROADCAST TOOLS® BRAND PRODUCTS!

CAUTION!

Broadcast Tools® Products, as with any electronic device, can fail without warning. Do not use this product in applications where a life threatening condition could result due to failure.

NOTE:

This manual should be read thoroughly before installation and operation.

WEBSITE:
Visit our web site for product updates and additional information.

Product Overview

The Audio Sentinel® is a web-enabled two channel stereo silence monitor combined with a transparent, integrated stereo audio switcher. Audio Sentinel® is designed to monitor two balanced or unbalanced independent stereo analog audio sources and switch to a back-up analog audio source when silence is detected on either or both input channels. The Audio Sentinel® may also be configured for independent dual-stereo non-switching applications. The Audio Sentinel® can be controlled and monitored locally and/or remotely over any IP network, including private networks, IP-based industrial control networks, and the Internet. Users can operate the product using a web browser or web-enabled mobile device. Email notification may be configured to alert up to eight recipients when alarms are detected. The user may also enable a sound effect to play on their PC speaker when an alarm is generated. Logging of system status, along with the site ID may be emailed in time spans from once an hour to once a day. One SPDT relay is supplied to indicate which input channel is feeding the output, while two additional independent SPDT relays may be configured to perform user defined action sequences. We have also provided SNMP capabilities to allow multiple units to be monitored with a user supplied SMNP manager software package. SMTP username and passwords are also supported.

Inspection

Please examine your Audio Sentinel® carefully for any damage that may have been sustained during shipping. If any damage is noted, please notify the shipper immediately and retain the packaging for inspection by the shipper. The package should contain the Audio Sentinel®, this manual and/or CD, 7 foot BLUE straight-through CAT 5 cable, 7 foot GRAY crossover CAT 5 cable, and the 7.5 VDC @ 1 amp wall transformer. Product PDF manual may be downloaded from our web site.

Installation

Surge Protection

The Audio Sentinel® has built-in resistance to voltage changes; we recommend that you use a power surge protector or line conditioner on the incoming AC line. Lightning strikes and/or other high voltage surges may damage your Audio Sentinel® and connected equipment if it is not properly protected. For lightning protection devices, check out www.polyphaser.com and www.itwlinx.com.

UPS Standby Power System

We recommend that you connect your Audio Sentinel® to a UPS system. A UPS helps minimize the risk to the Audio Sentinel® and provides AC power during a power outage.

CAUTION!

Installation of the Audio Sentinel® in high RF environments should be performed with care. The station ground should be connected to the designated chassis ground terminal or chassis ground screw using a 20 to 24-gauge wire.

WEBSITE:

Visit our web site for product updates and additional information.

e-mail: support@broadcasttools.com **voice:** 360.854.9559 **fax:** 866.783.1742

"NET" RJ45 network connector
Connect one end of the supplied CAT5 (straight or crossover) cable to the desired ETHERNET (WAN/LAN) or PC port.

POWER, 7.5 VDC connector
This is the connector used to power the unit. Never use any type of power supply other than the specified/supplied power supply.

PWR/Heartbeat LED
This led will flash indicating proper power and processor operation.

K3, K4, K5 relay connections
Equipment controlled by (de-energized state) relays K3, K4 and K5 should be connected to terminals labeled NC (normally closed); CM (common) and/or NO (normally open).

K3 & K4 operation is determined by the configuration assigned on the "Silence Sensor Setup" page.

K5 is used to represent the status of each channel. When channel ONE is selected or power is removed, the NO contact is open, while the NC contact is closed with respect to the CM contact.

Select/EXT input connection
The Select/EXTernal input accepts a ground closure for proper operation. Connections should be attached between the "EXT" and "GND" terminals.

Chassis (CHS) GND connection
Connect the station ground to this terminal.

Audio Inputs connections
Connect your audio sources to either of the two stereo balanced channels labeled LT1+/– and RT1 +/– or LT2+/ – and RT2 +/–. For unbalanced inputs, connected the high side of the source to the (+) positive input and the shield along with a jumper between the "–" input and GND terminals. Single (monaural) inputs should have their left and right inputs connected in parallel. Observe proper phasing.

WEBSITE:
Visit our web site for product updates and additional information.

e-mail: support@broadcasttools.com **voice:** 360.854.9559 **fax:** 866.783.1742

Audio Output Connections

Note: The switching function of the Audio Sentinel® is not required for proper operation. Connect the load to the terminals labeled "LT–/+ CM and RT–/+ CM. For unbalanced loads, use the "+" and GND terminals only. Shields should be tied to the "GND" terminals.

Manual Operation and Indicators

The Audio Sentinel® may be operated from most web browsers, front panel and/or remote control connections. The front panel is equipped with two LED's (Valid Audio x) to indicate when valid stereo or dual-monaural audio is detected for each channel.

Two additional LED's (channel x) indicate what channel is active (x indicates either channel one or two).

The "EXT/Select" push button is in parallel with the rear panel terminal. The front panel LED indicates when activated.

This function is user configurable for either sustained or toggle mode operation.

Note: Sustained mode operates in either manual or automatic mode.

Sustained mode is normally used with STL systems with the input tied to the receivers squelch relay. When the receiver fails, the squelch relay closes and forces the Audio Sentinel to switch to channel two. When the relay opens, the unit returns to channel one.

When the toggle mode is selected, each time this input is pulled to ground, the unit toggles between channels one and two.
NOTE: The unit MUST be in MANUAL mode.

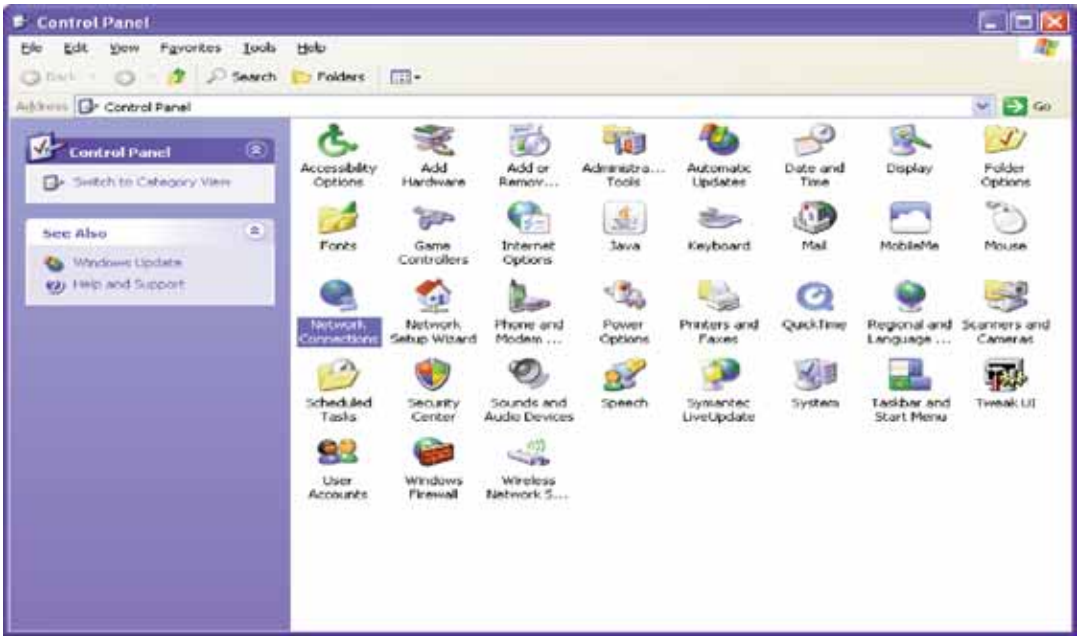
Factory defaults may be restored by depressing the recessed front panel "default" push button for five seconds while powering up the unit. The PWR/HB led will rapidly blink two to three times when loaded.

The slow blinking "PWR/Heartbeat" LED indicates valid power and proper operation.

Ethernet "Quick Start" guide

CAUTION! NEVER DOWNLOAD FIRMWARE UPDATES OR CHANGES TO THE XPORT WEBSERVER UNLESS INSTRUCTED TO DO SO BY BROADCAST TOOLS®. DOING SO DELETES ALL SOFTWARE AND VOIDS ALL WARRANTIES FROM BROADCAST TOOLS, INC.

Instructions for changing the IP address of the computer that will be used for the configuration of this product are given here. Note that these instructions are specifically for computers with the Windows XP operating system. For setup using other operating systems, refer to the appropriate OS user's manual.



Step 1: Open the control panel by clicking on the start menu, click on settings, then click on Control Panel. (Note that the control panel shown is in "Classic View". If control panel is in "Category View" select the "Classic View" option before proceeding.)

CAUTION!

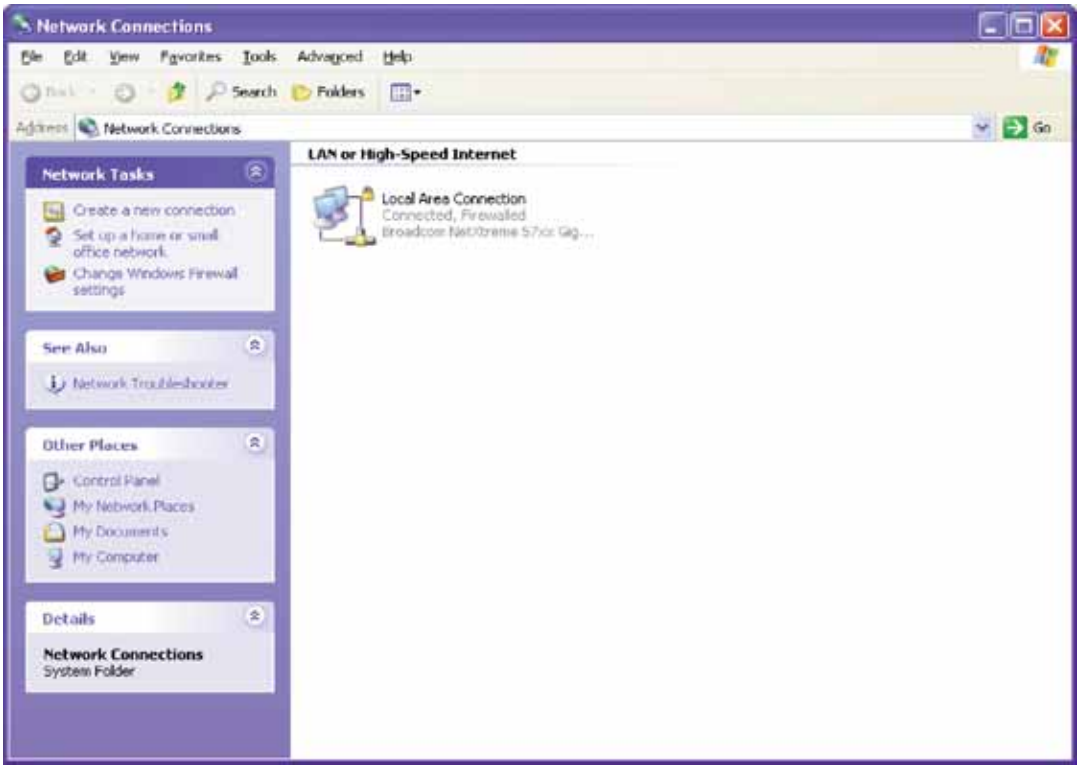
If you are not familiar with Ethernet enabled equipment, it may be useful to contact your IT department, network administrator or network consultant for assistance. Assigning an IP address already in use by another device may cause problems with your network!

WEBSITE:

Visit our web site for product updates and additional information.

e-mail: support@broadcasttools.com **voice:** 360.854.9559 **fax:** 866.783.1742

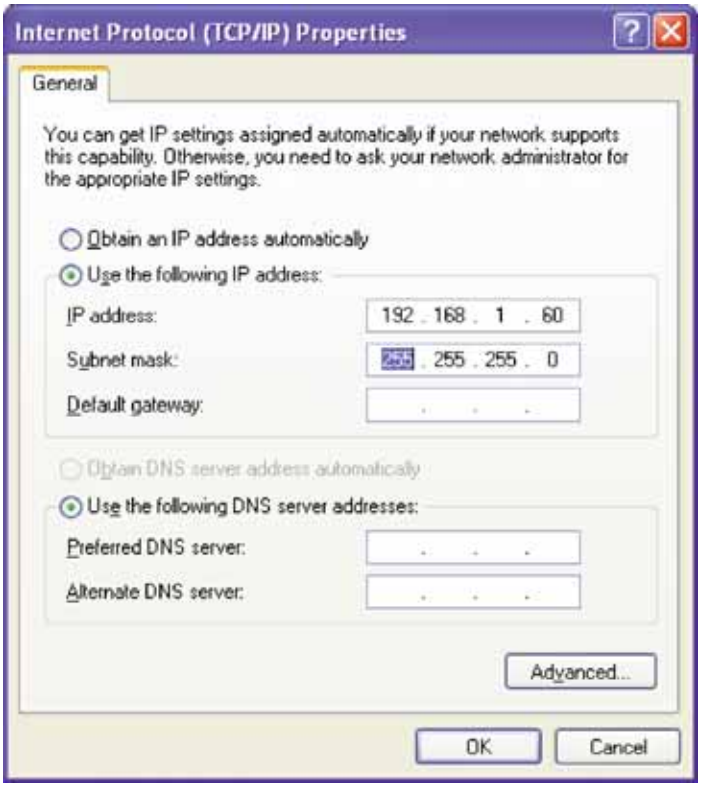
Step 2: Double click on the icon labeled Network Connections. The following menu will pop up.



Step 3: Right click on the icon labeled Local Area Connection. Another menu will appear. Select the option at the bottom of the menu labeled Properties. The Local Area Connection Properties window will appear.

e-mail: support@broadcasttools.com **voice:** 360.854.9559 **fax:** 866.783.1742

Step 4: On the Local Area Connection Properties page, double click on Internet Protocol (TCP/IP) to display properties.


Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address: 192 . 168 . 1 . 60
Subnet mask: 255 . 255 . 255 . 0
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Advanced...
OK
Cancel

Step 5: Before making any changes to the network settings, write down the current settings (or screen capture the page and print) so that they can be restored once the unit is configured. Next, select the radio button labeled "Use the following IP address" and type in the IP address 192.168.1.60. Type in the subnet mask of 255.255.255.0. Leave the default gateway field blank. Click OK to apply the new settings.

Opening the LOGIN Web Page

1. Connect the supplied GRAY colored XOVER cable between the PC's Ethernet port and the products "NET" network RJ45's jack.

2. Connect the supplied 7.5 Volt DC @ 1 amp power supply to the product's power jack labeled Power 7.5 VDC. Verify that the green PWR/Heartbeat LED is blinking and the left "LINK" LED above the "NET" Network RJ-45 is illuminated.

WEBSITE:
Visit our web site for product updates and additional information.

e-mail: support@broadcasttools.com **voice:** 360.854.9559 **fax:** 866.783.1742

Web Setup and Operation

Ethernet (NETWORK) port LED indicator functions

Link LED Left Side	
Color	Meaning
Off	No Link
Amber	10 Mbps
Green	100 Mbps

Activity LED Right Side	
Color	Meaning
Off	No Activity
Amber	Half Duplex
Green	Full Duplex

3. Open the product's login page by typing the following URL into the browser: http://192.168.1.55. The username and password is required to change any parameter and are case sensitive.

Factory "login" defaults: **username:** admin (lower case)
password: 1234

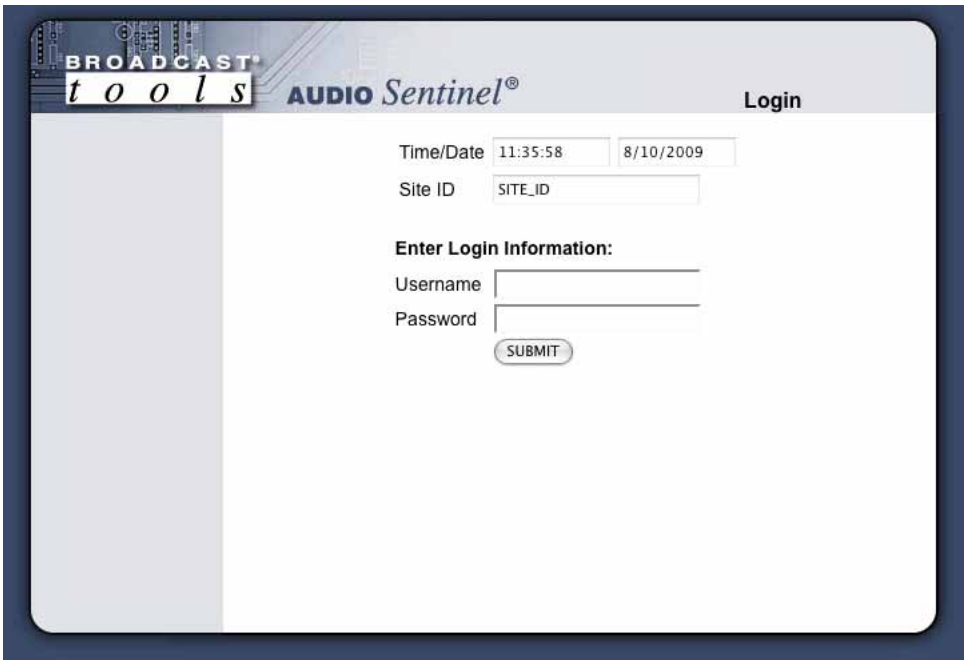
NOTE: You may view the password by checking the "Show Password" box.

4. Press the "Submit" button to login in. Once you are logged in, follow this manual for setup and/or operational information.

Once you are logged in, follow this manual for setup and/or operational information.

"Login" Web Page

The Login screen displays the Username and Password entry points.

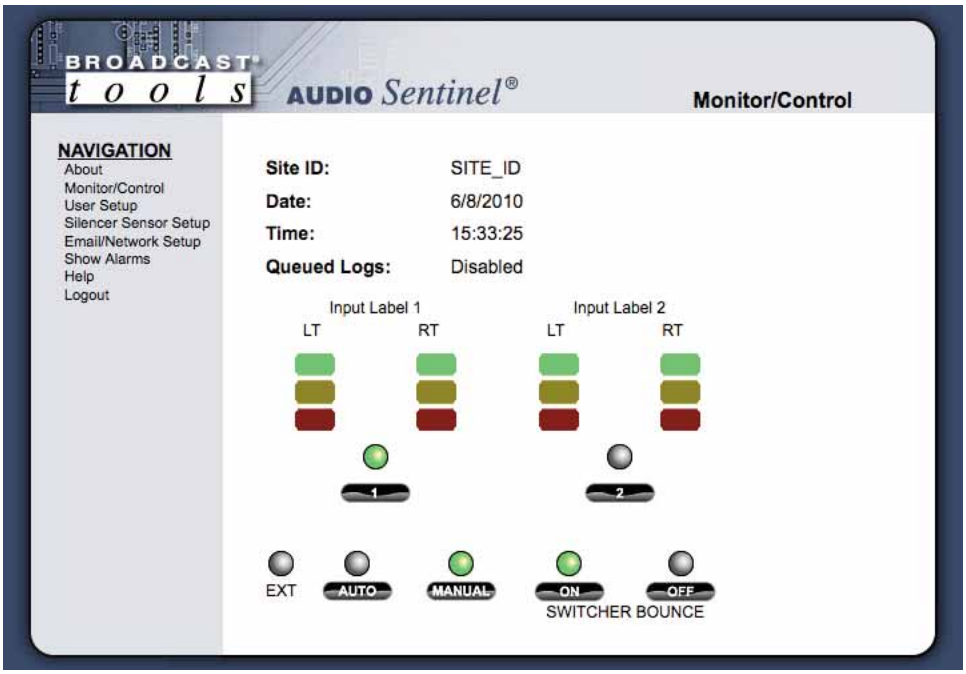


After you have successfully logged in, the Monitor/Control page will be displayed. Depending on your access level, you may or may not be able to control or modify the product's configuration.

NOTE:

We recommend the use of Firefox or Safari for Windows as your browser.

"Monitor/Control" Web Page



The Monitor/Control page allows the monitoring and or control of the Audio Sentinel. The following is an explanation of each item on this page:

User defined Site ID, Time and Date is always displayed.

Queued Logs: Displays the available number of queued logs.

Input Labels: User defined in the Silence Sensor setup page

Left and Right Level LED's: Display the left and right input levels for inputs one and two. The green led's operating from -19 and above. The yellow and red led activations are determined by the programmed trip levels.

WEBSITE:
Visit our web site for product updates and additional information.

Input Selection buttons: If the unit is in manual mode, the user may switch between each input by placing the cursor under each input LED, then click. The desired input is selected as denoted by the LED being illuminated.

EXT LED: Illuminates when the "SELECT/EXT" input is selected.

AUTO: When this mode is selected, any time input ONE fails, the unit will switch to input TWO. Manual and remote operation of the unit is disabled except for "SUSTAINED" operation. The LED is illuminated when selected.

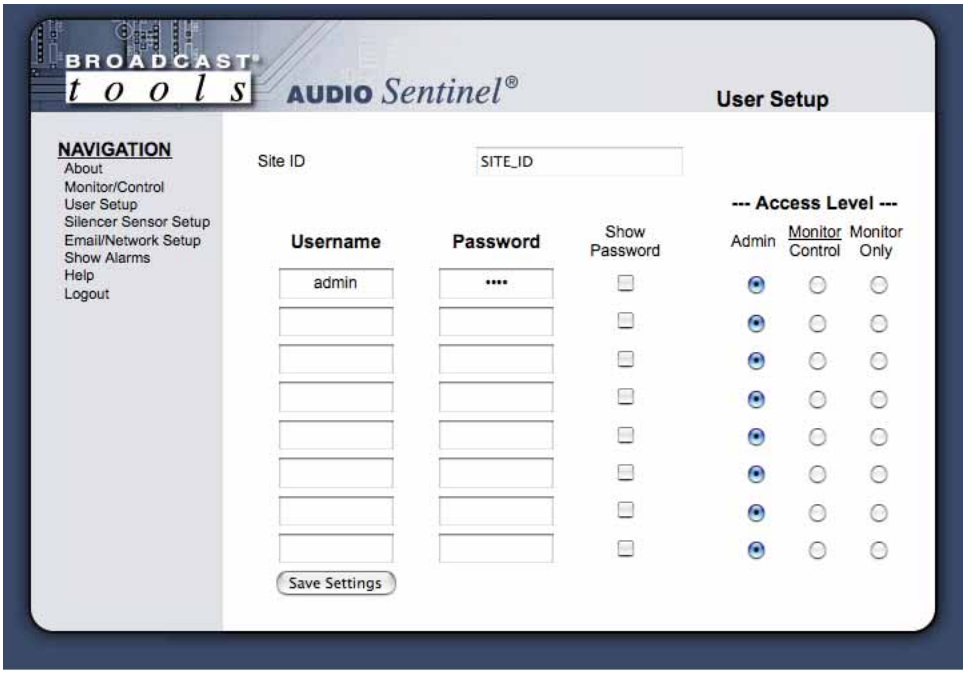
MANUAL: Manual mode allows the user to select either input one or two as well as remote control operation. The manual LED is illuminated when selected. . NOTE: No email alerts are generated.

SWITCHER BOUNCE: Allows the switcher to automatically switch between inputs when in AUTO mode and valid audio and time delays have expired.

NOTE: It is suggested that when used without the switching function, the unit should be set to "Auto" mode and "Switcher Bounce" set to OFF. This will allow alarm emails to be generated.

"User Setup" Web Page

This page can only be configured with (factory default) the "admin" access level.



To select other pages (if authorized); make your selection under the left hand Navigation column.

NOTE: You may view the password by checking the "Show Password" box.

Eight Usernames and Passwords may be configured for up to three access levels.

1. "Admin" allows complete product configuration access.

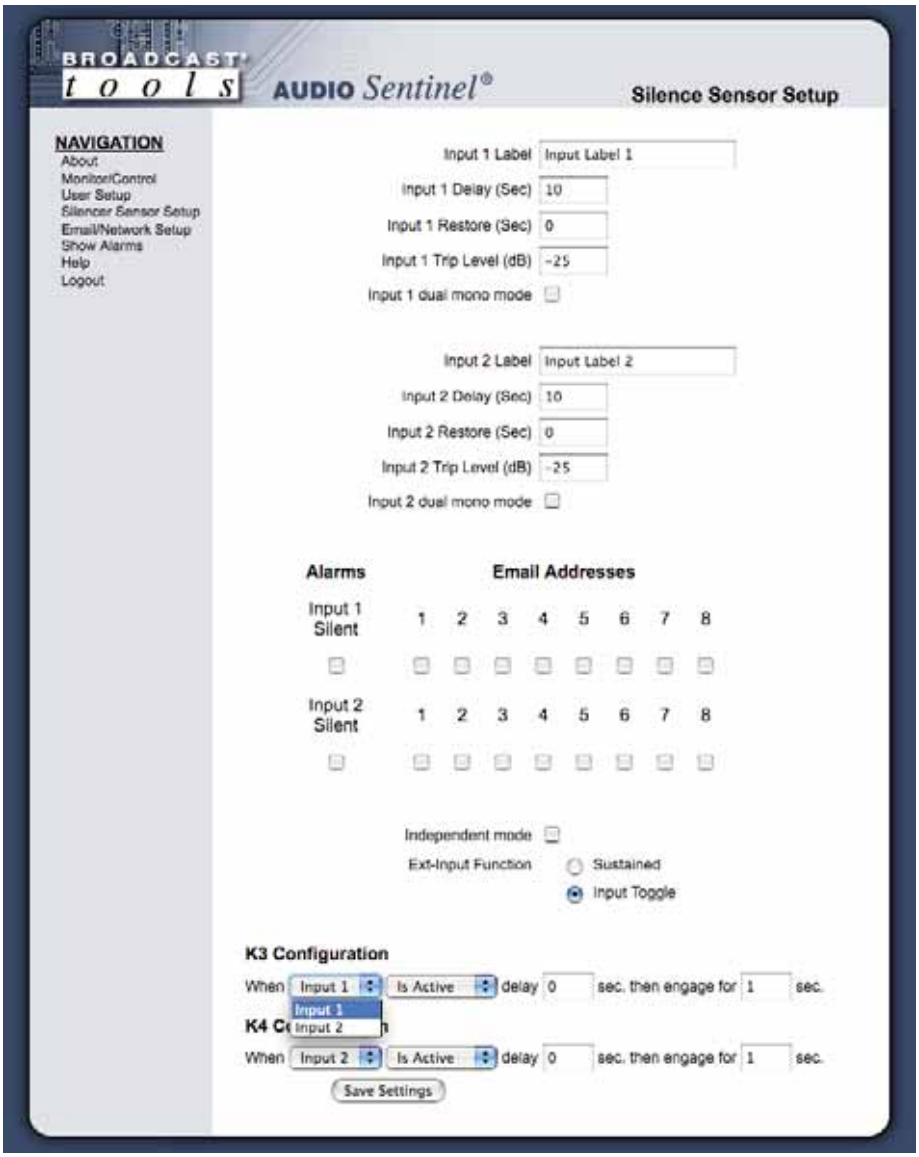
2. "Monitor/Control" allows the following access:
   About, Monitor/Control, Show log (unable to clear log), Help, and Logout.

3. "Monitor Only" allows the following access:
   About, Monitor only, Show log (unable to clear log), Help, and Logout.

NOTE: After any item has been changed, you MUST press the "Save Settings" button for your changes to be saved.

WEBSITE:
Visit our web site for product updates and additional information.

"Silence Sensor Setup" Web Page



NOTE: The delay and restore timing for both channels is 0 (OFF) to 65535 seconds (18 hours, 12 minutes and 15 seconds).

Input 1 Label: This is user defined. Up to 18 characters may be entered to describe input 1.

Input 1 Delay (Sec): This is the time from when the left, right or both inputs for input ONE falls below the trip level to when it switches to input TWO.

Input 1 Restore Delay (Sec): This is the time required for valid stereo audio to be present before the units switches back to input ONE.

Input 1 Trip Level (db): The left, right or both input levels at which input audio is considered BAD.

e-mail: support@broadcasttools.com **voice:** 360.854.9559 **fax:** 866.783.1742

Input 1 dual input mono mode:	When dual input mono mode is selected, both the left and right inputs must be below the trip level before the input is considered BAD and the audio is switched.
Input 1 Alarms:	When checked, generates an email alarm when the silence sensor enters an alarm condition, along with up to eight email alarms.
Input 1 email addresses:	The boxes email addressees labeled 1,2,3,4 allows the user to enable up to eight different email addresses for alarms.
Input 2 Label:	This is user defined. Up to 18 characters may be entered to describe input 2.
Input 2 Delay (Sec):	This is the time from when the left, right or both inputs for input TWO falls below the trip level to when it switches to input ONE.
Input 2 Restore Delay (Sec):	This is the time required for valid stereo audio to be present before the units switches back to input ONE.
Input 2 Trip Level (db):	The left, right or both input levels at which the input audio is considered BAD.
Input 2 dual input mono mode:	When dual input mono mode is selected, both the left and right inputs must be below the trip level before the input is considered BAD and the audio is switched.
Input 2 Alarms:	When checked, generates an email alarm when the silence sensor enters an alarm condition, along with up to eight email alarms.
Input 2 email addresses:	The boxes email addressees labeled 1,2,3,4 allows the user to enable up to eight different email addresses for alarms.
Independent:	When this mode is selected, the unit acts as two Independent silence sensor, with audio switching disabled.
Ext-Input Function:	Selects how the "Select/EXT" input will function. The operation is described in the Manual Operation section of this manual.

WEBSITE:
Visit our web site for product updates and additional information.

e-mail: support@broadcasttools.com **voice:** 360.854.9559 **fax:** 866.783.1742

K3 and K4 logic operation: Each relay may be independently programmed to operate when each input is considered bad or is restored. The logic for each relay is as follows:

When [input 1 or input 2] [Is Active, Inactive or Silent] delay [X] seconds then [Engage] for [X] seconds.

NOTE: **Delay timing = 0 (OFF) to 65535 seconds (18 hours, 12 min and 15 sec's).**

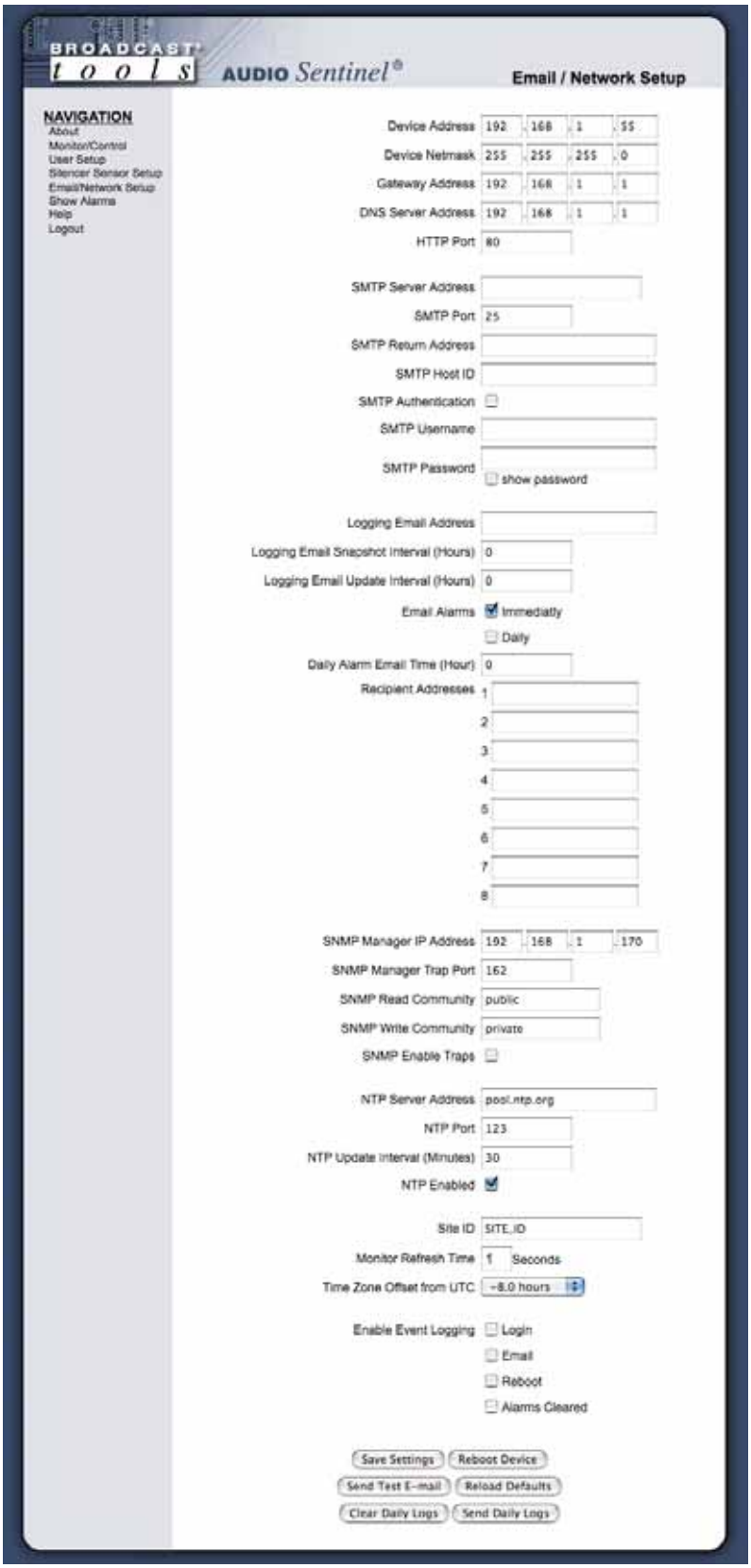
NOTE: **To enable relay latch type operation, the [Engaged] delay should be set to 0.**

NOTE: **Press the "Save Settings" button to save your changes.**

WEBSITE:
Visit our web site for product updates and additional information.

e-mail: support@broadcasttools.com **voice:** 360.854.9559 **fax:** 866.783.1742

"Email/Network Setup" Web Page



e-mail: support@broadcasttools.com **voice:** 360.854.9559 **fax:** 866.783.1742

NOTE: Restoring Network Factory Defaults

The Audio Sentinel® factory defaults may be restored by depressing the recessed front panel "default" push button for five seconds while powering up the unit.

"Email/Network Setup" Web Page – Device Network Settings

Device Address:	Enter a static IP address here.	Default: 192.168.1.55
Device Netmask:	Enter the Netmask here:	Default: 255.255.255.0
Gateway Address:	Enter the Gateway IP here:	Default: 192.168.1.1
DNS Server IP Address:	Enter your DNS address here.	Default: 192.168.1.1
HTTP Port:	Normally Port 80	Default: 80

"Email/Network Setup" Web Page – SMTP Settings

SMTP Server Address:	The user can enter either an IP address in the xxx.xxx.xxx.xxx format or a URI in the form: smtp.comcast.net. In order to resolve the URI, a working DNS server must be present or its IP address entered into the system.
SMTP Port:	Normally Port 25 Default: 25
SMTP Return Address:	Enter your return email here. If an email cannot be delivered, a message stating why will be sent to this address.

NOTE: The user must enter the following items before an email can be successfully sent: SMTP Server Address, SMTP Port, SMTP Return Address, SMTP Host ID, SMTP username and SMTP password must be supplied if authentication is turned on and the Recipient Address 1. The test email is sent to email recipient address 1.

The user should press the "Save Settings" button after entering the SMTP information before attempting an email test. If authentication fails, the email is not sent, please ensure that the username and password is correct.

SMTP Host ID:	Enter something here to identify the device.
SMTP Authentication:	When checked, Base64 SMTP authentication is supported by clicking on the checkbox.
SMTP Username:	Enter user name here.
SMTP Password:	Enter password here.

"Email/Network Setup" Web Page – Email Logging Settings

Logging Email Address:	IP address for the "Logging" email recipient (may be different from the 8 "Alarm" Recipient Addresses. Logging emails and Daily emails are sent to this address.
Logging Email Snapshot Interval:	The period in hours that a snapshot is taken of the system. An email is not sent on this interval.
Logging Email Update Interval:	The period in hours that the snapshots are emailed. This email may contain multiple snapshots if the Snapshot Interval is less than the Update Interval. Each snapshot will be identified by the date and time.

"Email/Network Setup" Web Page – Email Alarm Settings

Email Alarms:	Choose Immediate and/or Daily. If Immediate is selected, then an email will be sent out as soon as an alarm is generated. If Daily is selected, then each alarm is queued and the number of queued alarms is displayed on the Monitor/Control page.
Daily Alarm Email Time:	The time that queued alarms are sent. Queued alarms are sent to the Logging Email Address only.
"Alarm" Recipient Address:	Email addresses for up to 8 addresses. These address correlate to the 8 email addresses selectable on each I/O Device.

"Email/Network Setup" Web Page – SNMP Manager Settings

SNMP Manager IP Address:	This is the IP address of the SNMP manager. The system only accepts SNMP requests from this IP address, and will send traps to this IP address only.
SNMP Manager Trap Port:	This is the port number that SNMP trap messages will be sent.
SNMP Read Community:	This is the community name for Read-Only access.
SNMP Write Community:	This is the community name for Read-Write access.
SNMP Enable Traps:	When checked, trap messages will be sent. When Unchecked, no trap messages will be sent.

NOTE: A cold-start trap will be sent when the unit boots up if the SNMP Enable Traps is checked, otherwise trap messages are sent when a device enters or exits an alarm condition, depending on whether or not alarms are enabled.

WEBSITE:
Visit our web site for product updates and additional information.

"Email/Network Setup" Web Page – NTP Settings

NTP (Time) Server Address:	Enter the NTP address here. Default: pool.ntp.org	
NTP Port:	Normally 123.	Default: 123
NTP Update Interval (Min):	Time between timing updates.	Default: 30
NTP Enabled:	Must be enabled for correct timing. Default: Enabled	

"Email/Network Setup" Web Page – Other Settings

Site ID:	This is the Site Identifier that will be sent in each email.
Monitor Refresh Time (Sec):	How many seconds the Monitor page refreshes. Shorter times may increase network traffic.
Time Zone Offset from UTC:	Must be set for correct timing. Default: -8
Enable Event Logging:	Enabling these checkboxes will generate an alarm, but will not send an email. If the system is configured for Daily Alarm emails, then that Daily Alarm email will contain the Event Logging items as well.
Login:	Whenever someone logs into the system, the user-name and date/time will be logged.
Email:	Whenever an email is sent, the type of email and date/time will be logged.
Reboot:	Whenever the device boots, the date/time will be logged.
Alarms Cleared:	Whenever the Daily Logs or Normal Alarms are cleared, the type of log cleared and date/time will be stored. When Daily Logs are sent, the Daily Logs are also cleared; this will cause an event log as well.

WEBSITE:
Visit our web site for product updates and additional information.

"Email/Network Setup" Web Page – Controls

Save Settings: After pressing the "Save Settings" button, the device will reboot (If you changed the IP address, you must navigate your web browser to the new IP address (if the HTTP port was changed from port 80, be sure to add the new port number after the IP: xxx.xxx.xxx.xxx:port #). If you didn't change the IP address, then the web page will return to the login screen after the device reboots.

Reboot Device: When you press the "Reboot Device" button, the device resets, you must navigate your web browser to the new IP address.

Send Test Email: Press this button to send a test email. When the email has Completed, an alert box will pop-up indicating the status of the email and an error condition if the email was not sent correctly. If an email was not sent correctly, please review your SMTP settings and correct as necessary.

NOTE: After you are done making changes to the Email/Network Setup page, you MUST press the "Save Settings" button to save your changes.

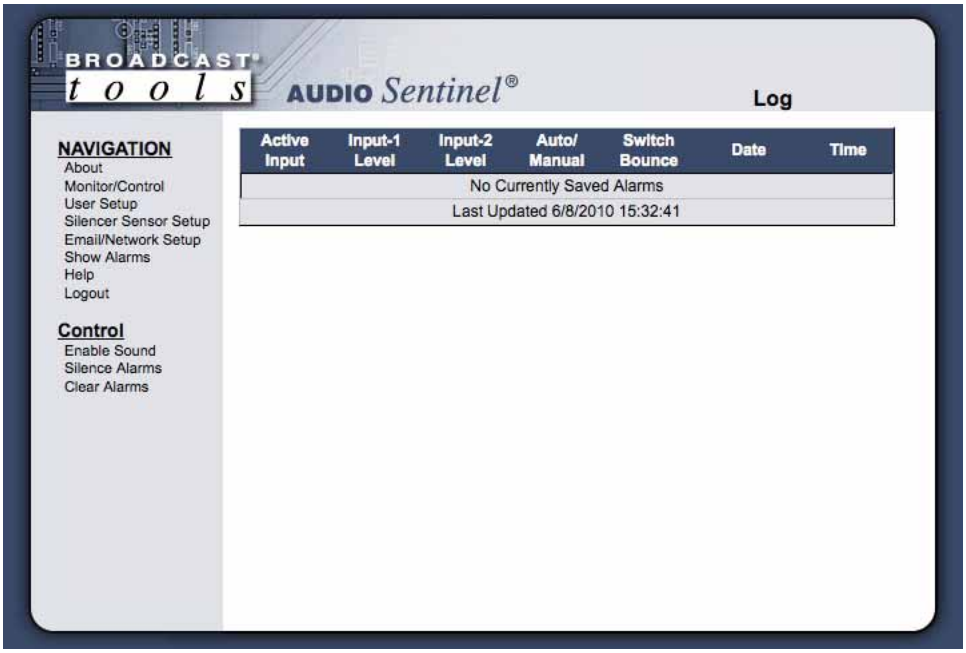
Reload Defaults: When you press the "Reload Defaults" button, the device resets, you must navigate your web browser to the new IP address (if the HTTP port was changed from port 80, be sure to add the new port number after the IP: xxx.xxx.xxx.xxx:port #).

Clear Daily Logs: When you press the "Clear Daily Logs" button, the daily logs stored in memory will be cleared. Keep in mind that if the Alarms Cleared Event is enabled, this event will post after the logs are cleared.

Send Daily Logs: When you press the "Send Daily Logs" button, the system will send the daily logs email and then clear those logs as if the correct time has expired.

e-mail: support@broadcasttools.com **voice:** 360.854.9559 **fax:** 866.783.1742

"Show Log" Web Page



This page displays current alarms.

Active Input: Displays which input is active.

Input 1 Level: Displays if input ONE has a valid level as configured.

Input 2 Level: Displays if input TWO has a valid level as configured.

Auto/Manual: Displays what switching mode is active.

Switch Bounce: Displays if switch bounce is ON or OFF.

Date: Displays what date the alarm was logged.

Time: Displays what time the alarm was logged.

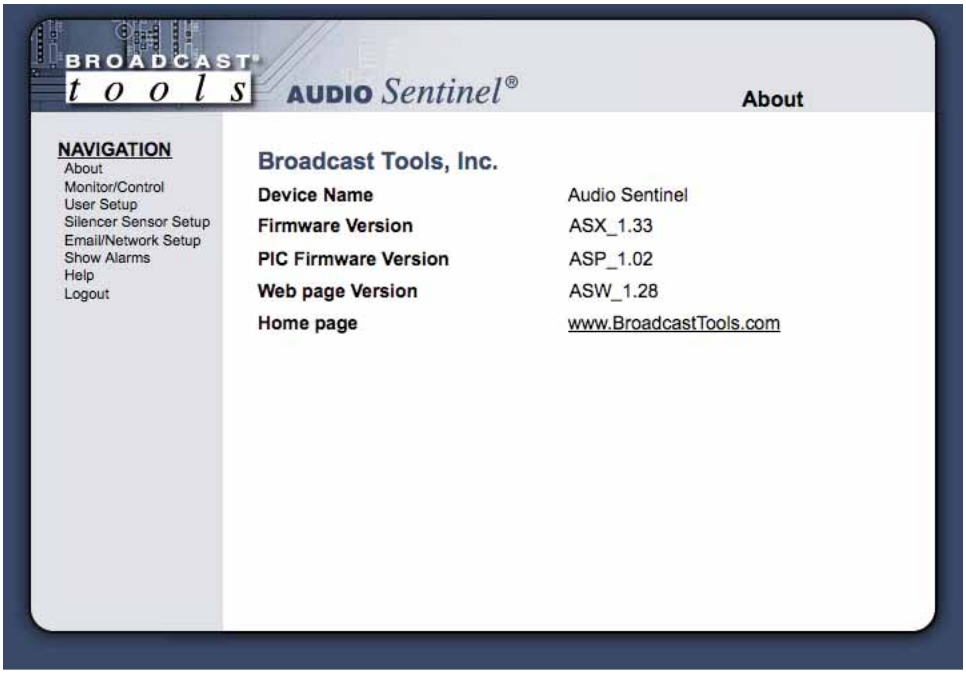
With the "admin" access level, the user may control all functions.

With the "Monitor/Control" and "Monitor" only access level, the user may view the "Show Log", enable/disable PC speaker sound and silence alarms.

NOTE: Shock Wave "Flash" must be installed and operating properly on your PC for the "Alarm Sound" to work when enabled.

e-mail: support@broadcasttools.com **voice:** 360.854.9559 **fax:** 866.783.1742

"About" Web Page



The "About" web page displays the product name, firmware version numbers, and Broadcast Tools® web site link.

WEBSITE:
Visit our web site for product updates and additional information.

Specifications

Ethernet Interface:	RJ-45, 10base-T or 100base-TX, auto sensing with link & activity led indicators - Full/half duplex.
Protocols:	TCP/IP, UDP/IP, ARP, ICMP, SNMP, TFTP, Telnet, DHCP, BOOTP, HTTP, and AutoIP.
Input Level:	-14 to +24 dBu, 22 K ohm, balanced.
Transparent (4PDT) Program switcher:	Any input level and impedance can be used. Inputs may be balanced or unbalanced. Output levels, impedance, distortion, noise and balancing will match that of the selected input.
Silence Sense (1 & 2) Level:	-24 to -35 dB below normal level, in 1dB steps.
Alarm Delay(1 & 2), Restore Delay(1 & 2) Time:	0 (OFF) to 65535 seconds (18 hours, 12 minutes and 15 seconds).
Select/EXTernal Input:	Closure to ground. Pulled up to 5 VDC. (Sustained or momentary depending on mode).
Relays (K3, K4, K5):	3 - SPDT dry contacts, 30 VDC @ 1 Amp.

CAUTION! For safety, never connect 120 Vac circuits to the above relays!

Connectors:	All I/O, removable euro-block screw terminals. Mating plugs supplied.
EMI / FCC Compliance:	See the Declaration of Conformity page. Operation is subject to the following two conditions: 1) This device may not cause harmful interference, and 2) this device must accept any interference received, including that which may cause undesired operation.
Required power supply:	7.5 VDC only @ 1 amp. 2.1mm ID x 5.5mm OD coaxial connector, center positive. Surge protected. Domestic PS supplied.
Size:	4.20" x 6.00" x 1.55", painted aluminum chassis w/ 4 - 6-32 mounting holes.
Weight:	2.0 lb.
Options:	* CE certified 240 VAC power supply. * RA-1, 1-RU rack shelf. Accommodates 4 units.

WEBSITE:
Visit our web site for product updates and additional information.

e-mail: support@broadcasttools.com **voice:** 360.854.9559 **fax:** 866.783.1742

LIMITED WARRANTY

The term "Buyer" as used in this document refers to and includes both (but only) (a) any person or entity who acquires such an item for the purpose of resale to others (i.e., a dealer or distributor of an item), and (b) the first person or entity who acquires such an item for such person's or entity's own use.

Broadcast Tools warrants to each Buyer of any item manufactured by Broadcast Tools that the item will be free from defects in materials and workmanship at the time it is shipped by Broadcast Tools if the item is properly installed, used and maintained.

EXCLUSIVE REMEDIES

If Broadcast Tools is notified, in writing, of a failure of any item manufactured by Broadcast Tools to conform to the foregoing Limited Warranty within one (1) year following the date of the Buyer's acquisition of the item, and if the item is returned to Broadcast Tools in accordance with Broadcast Tools' instructions for confirmation by inspection of the defect (which at Broadcast Tools' election may include, without limitation, a requirement that the Buyer first obtain a Return Authorization number from Broadcast Tools, that the Buyer furnish proof of purchase in the form of an invoice and/or receipt, and that the Buyer prepay all freight charges associated with any return of the item to Broadcast Tools using such freight service as Broadcast Tools reasonably may specify), Broadcast Tools will repair or replace the defective item, or will refund the purchase price paid by the Buyer for the item. Broadcast Tools shall have the exclusive right to choose between these alternative remedies.

NO OTHER WARRANTIES OR REMEDIES

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, BROADCAST TOOLS AND ITS SUPPLIERS DISCLAIM ALL OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE; AND THE FOREGOING ALTERNATIVE REMEDIES SHALL BE EXCLUSIVE OF ALL OTHER REMEDIES. THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY HAVE OTHER RIGHTS, WHICH VARY FROM STATE/JURISDICTION TO STATE/JURISDICTION.

NO LIABILITY FOR CONSEQUENTIAL DAMAGES

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, NEITHER BROADCAST TOOLS NOR ANY OF ITS SUPPLIERS SHALL HAVE ANY LIABILITY FOR ANY SPECIAL, INCIDENTAL, INDIRECT, CONSEQUENTIAL OR PUNITIVE DAMAGES WHATSOEVER (INCLUDING, WITHOUT LIMITATION, ANY DAMAGES FOR LOST PROFITS, BUSINESS INTERRUPTION, LOSS OF DATA OR INFORMATION, COST OF CAPITAL, CLAIMS OF CUSTOMERS, OR ANY OTHER PECUNIARY LOSS) ARISING OUT OF THE USE OF OR THE INABILITY TO USE ANY ITEM SUPPLIED BY BROADCAST TOOLS, EVEN IF BROADCAST TOOLS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES HAVE ANY LIABILITY FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL, EXEMPLARY OR PUNITIVE DAMAGES. THIS LIMITATION OF LIABILITY APPLIES WHETHER A CLAIM IS ONE ALLEGING BREACH OF A CONTRACT OR WARRANTY, NEGLIGENCE OR OTHER TORT, FOR THE VIOLATION OF ANY STATUTORY DUTY, THE FAILURE OF ANY LIMITED OR EXCLUSIVE REMEDY TO ACHIEVE ITS ESSENTIAL PURPOSE, OR ANY OTHER CLAIM OF ANY NATURE. BECAUSE SOME STATES AND JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, THIS LIMITATION MAY NOT APPLY TO YOU.

Broadcast Tools, Inc.
131 State Street
Sedro-Woolley, WA 98284 • USA

360.854.9559 **voice** • 866.783.1742 **fax**
support@broadcasttools.com **e-mail**
www.broadcasttools.com **website**

Declaration of Conformity

The XPORT Device contained in the Audio Sentinel® conforms to the following standards: (according to ISO/IEC Guide 22 and EN 45014)

Manufacturer's Name & Address:
Audio Sentinel®: Broadcast Tools®, Inc.
131 State Street, Sedro Woolley, WA 98284-1503 USA

XPort: Lantronix 15353 Barranca Parkway, Irvine, CA 92618 USA
Declares that the following product:

Product Name Model: XPORT™ Device Server
Conforms to the following standards or other normative documents:

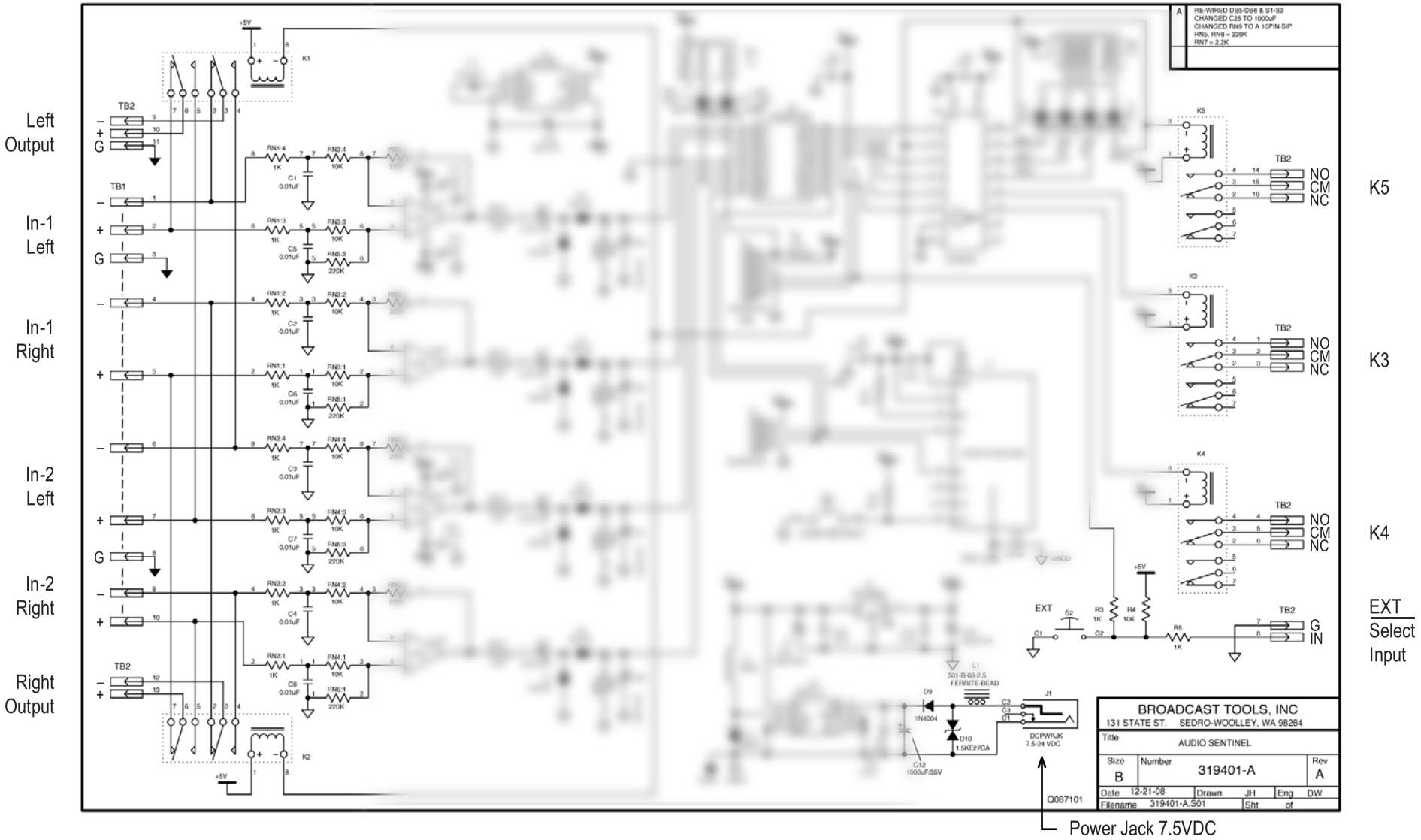
Electromagnetic Emissions:
EN55022: 1998 (IEC/CSPIR22: 1993) Radiated RF emissions, 30MHz-1000MHz
Conducted RF Emissions – Telecom Lines – 150KHz – 30MHz
FCC Part 15, Subpart B, Class B
IEC 1000-3-2/A14: 2000
IEC 1000-3-3: 1994

Electromagnetic Immunity:
EN55024: 1998 Information Technology Equipment-Immunity Characteristics
Direct ESD, Contact Discharge
Indirect ESD
Radiated RF Electromagnetic Field Test
Electrical Fast Transient/Burst Immunity
RF Common Mode Conducted Susceptibility
Power Frequency Magnetic Field Test

Manufacturer's Contact:
Audio Sentinel® Broadcast Tools®, Inc.
131 State Street
Sedro Woolley, WA 98284-1503 USA
Tel: 360 . 854 . 9559 Fax: 866 . 783 . 1742

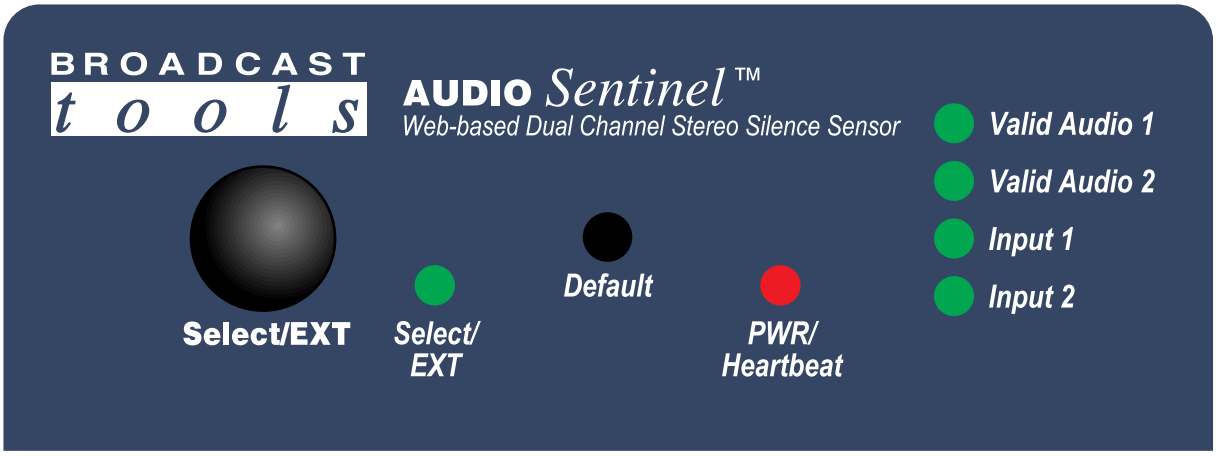
XPORT™
Lantronix:
Director of Quality Assurance
15353 Barranca Parkway, Irvine, CA 92618 USA
Tel: 949 . 453 . 3990 Fax: 949 . 453 . 3995

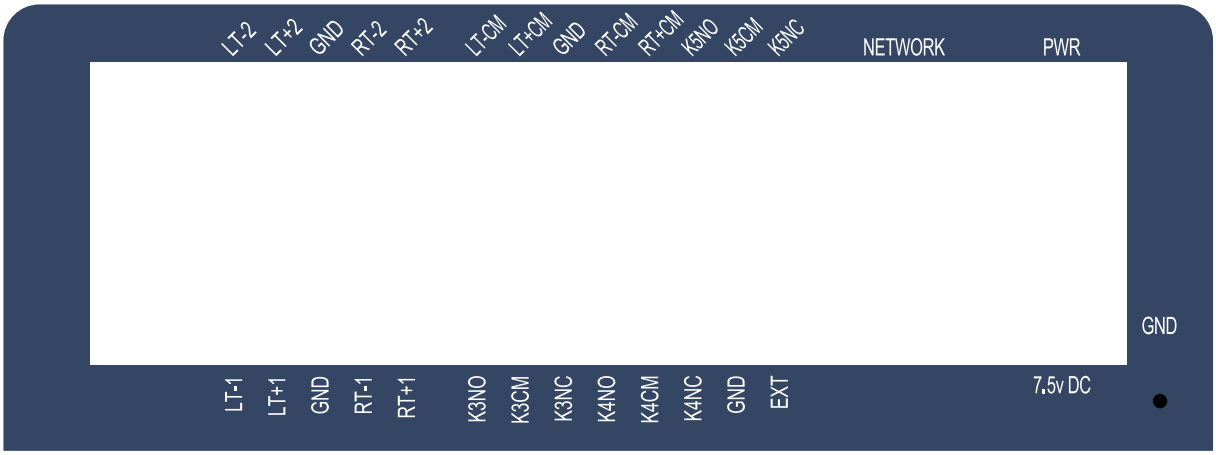
WEBSITE:
Visit our web site for product updates and additional information.



131 State Street, Sedro-Woolley, WA 98284 • 360.854.9559 • Fax 866.783.1742
Visit us online at www.broadcasttools.com
Copyright © 1989-2009 by Broadcast Tools, Inc. All Rights Reserved.

Appendix





e-mail: support@broadcasttools.com **voice:** 360.854.9559 **fax:** 866.783.1742